

A new *Amegilla* (Hymenoptera: Anthophoridae) from Western Australia

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Abstract

Amegilla paracalva sp. nov. is described here in response to studies of Houston (1991). It belongs to the subgenus *Asaropoda* which is endemic to the Australian region (not Tasmania or New Zealand). Descriptive morphology follows that of Brooks (1988).

Amegilla (Asaropoda) paracalva sp. nov.

Figures 1-6

Holotype

Male: *Western Australia*, 16 km WSW of Lyons River Homestead, (24°38'S, 115°20'E), 30 August-1 September 1980, C.A. Howard and T.F. Houston collection numbers 344-27, reared from brood cell. Became adult 5 September 1983, Western Australian Museum Collection (WAMC) 90/879.

Paratypes

Allotype with same data but collection number 344-14/ex: nest burrow in breakaway hollow, WAMC 90/880; 2 female paratypes with same data except first specimen with collection number 344-27, ex: nest in clay flat, WAMC 91/179 and second reared from cell taken from ground nest, pupated prior to 12 October 1981, adult by 6 November 1981, WAMC 91/180. Holotype, allotype and one paratype at the Western Australian Museum, Perth and one paratype at the Snow Entomological Museum, Lawrence, Kansas.

Diagnosis

Body covered with buff to light orange hair; integumental facial marks cream-coloured (Figures 1,2); male genitalia and metasomal stema as Figures 3-6.

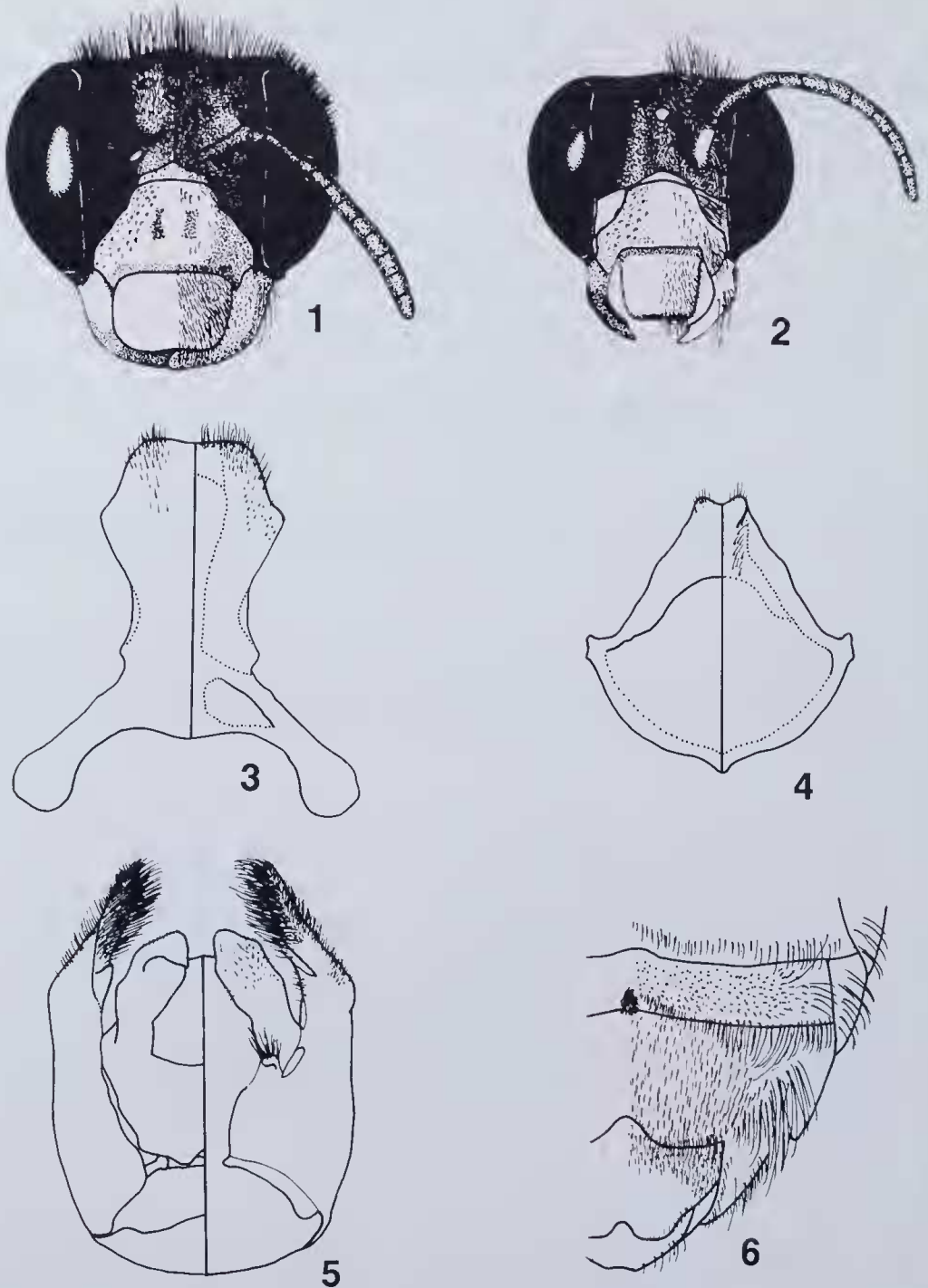
Amegilla (Asaropoda) paracalva sp. nov. can be separated from *A. calva* and *A. preissi* in that it has white to cream-coloured integumental facial marks while those of the latter two are lemon yellow. Also in male *A. paracalva* the apicomedian emargination of S5 is much wider than deep, the base of the emargination is rounded the sides being at a 90° angle and S6 is apicomediaally emarginate. S5 of *A. calva* and *A. preissi* has an apicomedian emargination about as wide as deep, emargination basally angulate not rounded with the sides about 60° and S6 is apically simple to very slightly emarginate. *A. calva* and *A. preissi* are restricted to New South Wales and Queensland, *A. paracalva* to Western Australia.

Description

Male (holotype)

Body length about 15 mm; forewing length about 10 mm. Inner orbits parallel; shortest distance between eyes 0.83 frontal length of eye; head wider than long; clypeal

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Figures 1-6 *Amegilla paracalva* sp. nov.; 1, female face; 2, male face; 3-5, male S7, S8 and genital capsule, left side is dorsal, right is ventral; 6, male S5-7, ventral view.

protuberance in profile 0.67 eye width; mandible with weak subapical tooth; flagellomere 1 equal to combined lengths of next 1.5 flagellomeres and 0.68 as long as scape (excluding basal bulb); flagellomere 2 equal to 0.77 length of flagellomere 3; flagellomeres 3-10 gradually increasing in length; last flagellomere subequal to length of flagellomere 1; distance between posterior ocelli 1.1 ocellocular distance; distance from median ocellus to posterior ocellus equal to 0.68 ocellocular distance. Marginal cell length equal to 0.82 distance from apex of cell to wing tip; cu-v of hind wing about equal to length of second abscissa of M+Cu; jugal lobe about half as long as vannal lobe. S5 and S6 with narrow apicomedian emargination (Figure 6); S7, S8 and genital capsule as in Figures 3-5.

Pubescence. Head with pale buff hair, lighter on lower half; scutum with light orange-brown and scattered black hairs; metanotum and scutellum with light orange-brown hair, rest of thorax with pale hair; foreleg with pale hair on outer surface, dark orange-brown hair on inner surfaces of tibia and tarsus; midtibia pale with mixture of dark and pale hair on tarsus and all dark on inner tarsal surface; hindleg pale only on outer surface of femur and tibia, rest dark. Metasomal terga with appressed orange-brown hair that is lighter and longer laterally but with a few dark hairs laterally on T6 and dark dense pile apicolaterally on T7; S1-5 with pale apical fringes which are longer laterally; S4 with apicomedian patch of black apically directed bristles (Figure 6); S6 with basal band of pale hair.

Colouration. Black except integumental facial marks, mandibular base, labrum, clypeus, paraocular and supraclypeal areas and anterior portion of scape cream coloured as in Figure 2; apical half of mandible, maxilla, glossa, tegula, legs, apices of metasomal sterna and terga reddish-brown.

Punctuation. Punctures on clypeus 0.5-1.0 puncture-widths apart, rather dull basally to shiny apically; rest of punctuation typical of *Amegilla*.

Female

Body length 16 mm, forewing length 13 mm. Agrees with description of male except for sex-limited characters including facial marks (Figure 1) and as follows: flagellomere 1 equal to combined length of next 2.7 flagellomeres, about as long as scape (excluding basal bulb) and 1.7 as long as last flagellomere; distance between posterior ocelli about equal to ocellocular distance, from median to posterior ocellus 0.64 ocellocular distance.

Pubescence. Outer posterior surface of foretarsus with long curved dark hairs; inner surface of midleg with dark hair; anterior and posterior surfaces of midfemur pale; outer surface of midtibia pale with dark band on apicoposterior surface; midtarsus with scattered white hairs on anterior surface and white posterior band; inner surfaces of hindleg black, out surfaces white except anterior edge of tarsus black; metasomal terga with scattered inclined dark hairs, T5 with apicomedian tuft of dark hair; T6 all black; metasomal sterna with long dark hairs medially, pale hairs laterally.

Remarks

Amegilla paracalva sp. nov. is most closely related to *Amegilla calva* (Rayment) and *A. preissi* (Cockerell). Among *Asaropoda* these three species are uniquely characterized

by hair pale to gray evenly covering thoracic and metasomal areas; midtibial spur strongly hooked apically and S6 of female simple without U-shaped carina delimiting median area.

References

- Brooks, R.W. (1988). Systematics and Phylogeny of the Anthophorine Bees (Hymenoptera: Anthophoridae; Anthophorini). *Univ. Kansas Sci. Bull.* **53**: 436-575.
- Houston, T.F. (1991). Ecology and behaviour of the bee *Amegilla (Asaropoda) dawsoni* (Rayment) with notes on a related species (Hymenoptera: Anthophoridae). *Rec. West. Aust. Mus.* **15**: 535-553.